INSTRUCTION MANUAL

SONANCE THIN LINE TL622$_R$

6 ½" IN-CEILING SPEAKER

INTRODUCTION

Thank you for purchasing Sonance Thin-Line TL622$_R$ in-ceiling speakers. When properly installed, these speakers will give you many years of entertainment pleasure. To get the most out of your new speakers, please read this manual thoroughly before you begin installation. To achieve the best performance, Sonance recommends that these speakers be installed by an authorized dealer/installer.

PARTS LIST

Your Sonance Thin Line in-ceiling speakers include the following:

- (2) Sonance Thin Line TL622$_R$ Speakers
- (2) Paintable Grilles
- (2) Plastic paint plugs to protect speakers during painting
- (1) Mounting cutout template (in packaging)

OPTIONAL ACCESSORIES

Symphony FlexBracket (part# 92092) and **Symphony Staple Template** (part# 901049) — Plastic templates to reserve a mounting hole for the speaker in new construction. Designed to be used with the RotoLock® mounting system.

Symphony Coverplate (part# 900643) — Covers the hole made by the FlexBracket during construction until the speaker is installed.

Sonafill® In-Ceiling System (part# 91928) — Retrofittable acoustical treatment for in-wall speakers consisting of two pillows and four tiles that virtually eliminates noises produced by resonating drywall. Dramatically improves midbass sound quality and reduces sound transmission into adjacent rooms.

Symphony Acoustic Enclosure (part# 91688) — ½" MDF enclosure that provides ideal acoustic performance and maximum reduction of sound transmission into adjacent spaces. Designed for use only in new construction.

Fire-Rated Back Can (part# 91906) — Meets ASTM E 119, CAN/ULC S 101, NFPA 251, UBC 7-1 and UL 263 criteria for commercial installations.

SPEAKER PLACEMENT

The locations of the speakers should be determined by considering your primary listening location, the primary use for the speakers (distributed audio, 2-channel or home theater) and aesthetic values. For optimum results contact your Authorized Sonance Dealer for advice.

Home Theater Placement

Left, Center and Right Speakers

- Place the left, center and right speakers from 1 foot to 2 feet in front of the video screen, anywhere from 6 feet to 10 feet apart, with the center channel speaker as close to midway between the left and right speakers as possible.
- Place the left & right speakers at least 2 to 3 feet away from the side walls.
- The main listening position should be between 4 and 10 feet away from the speakers.

Left & Right Surround Speakers (5.1-Channel System)

Locate the left and right surround speakers on the ceiling between 2 feet and 6 feet behind the listening position. The speakers should be between 6 feet and 10 feet apart. Since the surround speakers are usually called-upon to create diffuse effects like the sound of wind or rain, they can be located close to walls without adversely affecting sound quality.

Use *Illustration 1* as a guide.

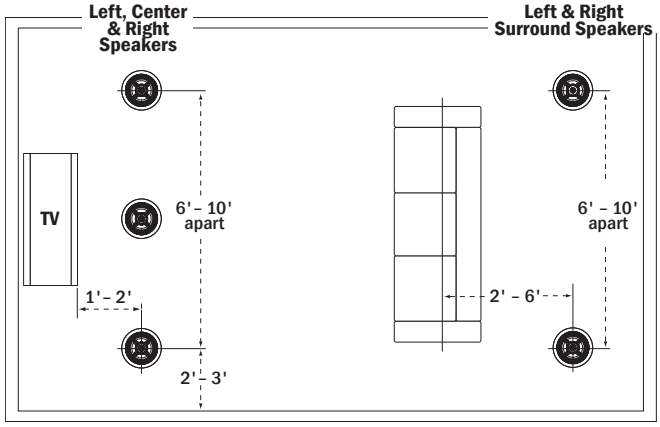


Illustration 1: 5.1-Channel Home Theater Placement

Left & Right Surround and Surround Back Speakers (7.1-Channel System)

- *Left & Right Surround Speakers:* In a 7.1-channel system, place the left and right surround speakers directly to the sides of the listening position, between 6 feet and 10 feet apart. The speakers can be placed close to the side walls.
- *Surround Back Speakers:* Place the surround back speakers between 2 feet and 6 feet behind the listening position. The surround back speakers should be closer together than the left and right surround speakers — between 3 feet and 6 feet apart. Like the left and right surround speakers, the surround back speakers can be located close to walls without adversely affecting sound quality.

Use *Illustration 2* as a guide.

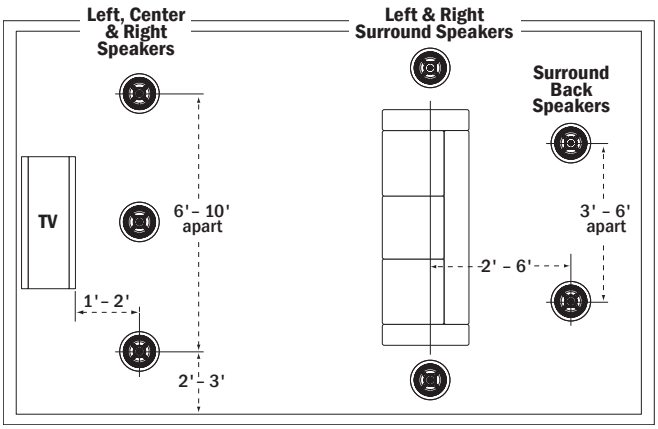


Illustration 2: 7.1-Channel Home Theater Placement

2-Channel Placement

Follow the directions for Home Theater Placement for the left and right speakers.

Distributed Audio Placement (Mono Signal)

Sonance TL622R in-ceiling speakers have very smooth and predictable off-axis response, increasing placement options while providing excellent coverage in distributed audio systems. The chart below shows how far apart the speakers can be placed while still providing good coverage. The distances are based on ear heights of 62" for standing listeners and 40" for seated listeners.

Speaker spacing in feet for a distributed audio system		
	Standing Listener	Seated Listener
8-foot ceiling	5.7'	9.5'
10-foot ceiling	9.7'	13.5'
12-foot ceiling	13.7'	17.5'
14-foot ceiling	17.7'	21.5'

WIRE GAUGE

Extra resistance in the speaker wire can make a speaker sound less dynamic and reduce definition of the bass frequencies. In extreme cases, it can even attenuate high frequencies. Also, amplifier power is wasted in wire with extra resistance, reducing your system's maximum output level.

To prevent degrading sound quality, the total wire resistance should be less than 10% of the speaker's impedance. This means that for an 8-ohm speaker, the total resistance of the wire should be less than 0.8 ohms.

Refer to the following table when selecting the proper wire gauge for your system:

Wire resistance in Ohms vs. length of cable run						
Distance in Feet	50'	100'	150'	200'	250'	300'
20 gauge	1.04	2.07	3.11	4.14	5.18	6.22
18 gauge	.65	1.30	1.96	2.61	3.26	3.91
16 gauge	.41	.82	1.22	1.63	2.04	2.45
14 gauge	.26	.52	.77	1.03	1.29	1.55
12 gauge	.16	.32	.49	.65	.81	.97
10 gauge	.10	.20	.31	.41	.51	.61

PREPARING THE INSTALLATION LOCATION

All Sonance speakers are designed to be relatively insensitive to variations in enclosure volume. To achieve the ultimate performance from your speakers, a section of the ceiling bay can be sectioned-off and sealed to form a back box. Building such an enclosure will create a dramatic improvement in bass performance and power handling.

Ideal back box volume requirements:

Thin Line TL622R 1.2 ft³

Insulating the Ceiling Cavity

To reduce sound transmission to adjacent rooms and further improve speaker performance, insulate the ceiling cavity by inserting a sheet of unfaced fiberglass insulation behind and around the speaker.

To reduce noise produced by unsupported drywall, install fiberglass insulation in the ceiling bays adjacent to the speaker location.

Sonafill® Resonance Cancellation System

To dramatically reduce sound transmission to adjacent rooms and improve speaker performance, Sonance recommends installing the Sonafill® in-ceiling resonance cancellation system (part# 91928) in each speaker's ceiling cavity. Sonafill utilizes acoustic damping tiles and acoustic absorption pillows to cancel drywall vibration and reduce the resulting coloration of the speakers' sound. The Sonafill system can be easily retrofitted into existing ceilings.

INSTALLING THE SPEAKERS

New Construction

For installations in new construction, Sonance recommends using a Symphony FlexBracket (part# 92902) to reserve a location for the speaker. The FlexBracket is nailed or screwed to the studs and serves as a guide for the drywaller so that the speaker hole will be in the desired location once the drywall is installed.

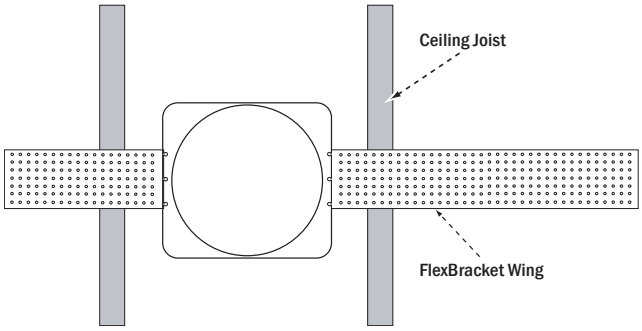


Illustration 4: Symphony FlexBracket Installation

Symphony FlexBrackets are compatible with the RotoLock mounting system (see *Retrofit*, below).

Retrofit

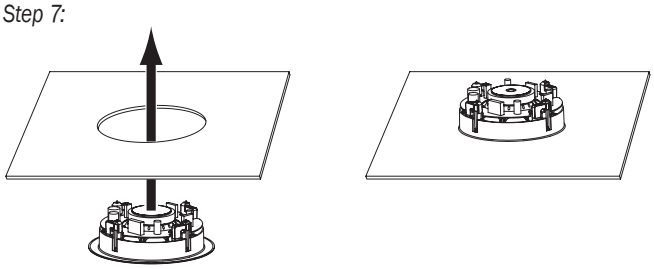
TL622R Speakers feature an integral RotoLock® mounting system for quick mounting directly into existing ceilings and walls. Once the hole is cut and the cable is run, you can install the speaker in a matter of seconds.

1. Determine the location for the speaker (see *Speaker Placement*).
2. Perform an obstruction survey to be certain that there are no studs, conduit, pipes, heating ducts or air returns that will interfere with the speaker.
3. The cutout for the TL622R speaker is $8^{5}/_{32}$" (207mm). There also must be at least $3^{1}/_{16}$" (77mm) depth within the ceiling cavity for the speaker.
4. Find the cutout template provided in the speaker packaging. Position the template where the speaker is to be located and pencil an outline on the ceiling.
   - If you are unsure about obstructions, drill a small hole in the center of the outline and insert a coat hanger wire into the hole to feel-around for possible obstructions.
5. Cut the hole using a drywall saw, and run the speaker wires.
6. Remove the paint plug from the speaker. Connect the speaker wire to the terminals on the back of the speaker. Double-check that you connected amplifier + to speaker + and amplifier – to speaker –.

7. Make sure all the RotoLock clamps are in the full clockwise position so that they are tucked within the cutout border. Insert the speaker into the hole in the ceiling.

   Note: The RotoLock system can accommodate a maximum ceiling material thickness of 1 3/8".

Step 7:

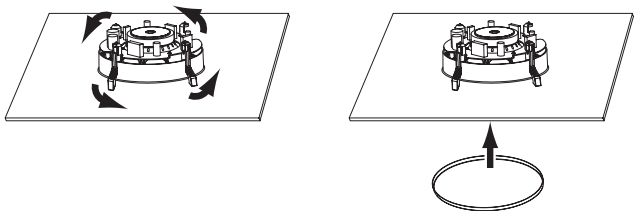


8. Tighten the four screws on the front of the speaker baffle. The RotoLock clamps will automatically rotate into position and begin clamping the speaker.
   - When you notice resistance on the four screws the speaker has been clamped successfully.

   The speaker flange is designed to flex and conform to any small imperfections in the wall surface. Do not tighten the screws so much so that the flange bows-out.

   Important: Always use low-torque settings — NEVER over-tighten.

Step 8: *Step 9:*



9. Attach the grille after the speaker has been installed. Insert about half of the grille into the groove at the edge of the speaker. Gently fit the remaining half of the grille by working around the speaker, fitting the grille into the groove as you go.

   Note: You can adjust the torque applied to the RotoLock screws to achieve a proper grille fit.

PAINTING THE SPEAKERS AND GRILLES

You can paint the speakers and grilles before installing them, which will eliminate the "paint scar" if the speaker ever needs to be removed for service. You can also paint the speakers after installation, but before the grilles are attached. All Symphony speakers come from the factory fitted with a plastic 'paint plug'. Use the paint plug to protect the speaker drivers while the flange is being painted along with the wall.

Sonance always suggests painting the grille separately from the speaker. Before painting, carefully remove the under-grille cloth. It is held in place with a light tacking glue that makes it easy to remove.

Spray the grilles with thinned paint (5 parts thinner to 1 part paint), being careful not to plug the holes. Too heavy a coat of paint on the grille will adversely affect the sound of the speaker.

Once the grilles and flange are painted and dry, replace the under-grille cloth, remove the paint plug from the speaker flange and install the grille.

TWEETER LEVEL CONTROL

The Thin Line TL622R has a tweeter level control switch that lets you boost or cut the tweeter's level by 3dB.

Once you have installed the speakers, listen to a variety of music that you are familiar with. If the music all tends to sound too bright, adjust the level control to the -3dB position. If the music all tends to sound too dull, adjust the level control to the +3dB position. If some recordings sound dull and some sound bright, the speaker is accurately reproducing differences in the recordings, and you should leave the control in the 0dB position.

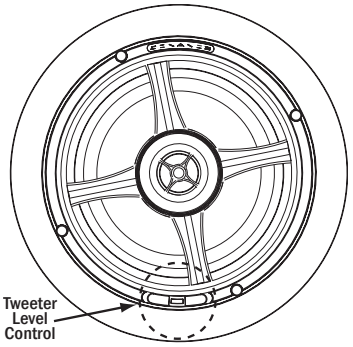


Illustration 5: Tweeter Level Control

SPECIFICATIONS

TL622R

Tweeter:	1" (25mm) Silk dome, Ferrofluid-cooled
Woofer:	6½" (165mm) Polypropylene cone, rubber surround
Frequency Response:	45Hz – 20kHz ±3dB
Impedance:	8 Ohms nominal; 6 Ohms minimum
Power Handling:	5 watts minimum; 125 watts maximum
Sensitivity:	89dB SPL (2.83V/1 meter)
Grille Material:	Perforated aluminum
Adjustments:	Tweeter level (±3dB)
Dimensions (Dia. x Depth):	9¾" x 2 15/16" (248mm x 75mm)
Cutout Diameter:	8 5/32" (207mm)
Shipping Weight:	10 lbs. (4.5 KG) Pair

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6½" IN-CEILING SPEAKER

TECHNICAL ASSISTANCE AND SERVICE

If you any have questions about the operation or installation of this product, please call our Technical Assistance Department on any business day at (800) 582-0772 or (949) 492-7777; from 7 a.m. to 5 p.m., PST.

If your speakers should need repair or service, contact your Sonance Authorized Dealer for help, or use the following procedure:

1. Prior to calling, note the product's model number, serial number, purchase date, and the name and address of the dealer where you purchased the product.
2. Contact our Technical Assistance Department at the above number(s) and describe the problem the unit is experiencing. If applicable, they will issue a Return Authorization Number.

IMPORTANT: YOU MUST HAVE PRIOR AUTHORIZATION TO RETURN YOUR SPEAKER TO SONANCE!

3. If you're directed to return the unit to Sonance for repair, pack the unit in its original shipping carton. If needed, you can obtain replacement packaging from us for a small charge. Note: it is best if you place the box into an additional outer "overcarton" before shipment to minimize a chance of theft in shipment. Please include a copy of the original bill of sale inside the package.
4. Contact United Parcel Service, Federal Express, or RPS to arrange prepaid (not collect) shipping. Do not use the U.S. Mail Service.

IMPORTANT: FREIGHT COLLECT SHIPMENTS WILL BE REFUSED.

5. **Write the Return Authorization Number on the outside of the shipping carton.**
6. Ship the packaged unit to:

Quality Assurance Department
Sonance
212 Avenida Fabricante
San Clemente, CA 92672-7531

LIMITED LIFETIME WARRANTY COVERAGE (U.S. ONLY)

Sonance warrants to the original retail purchaser only that this Sonance product will be free from defects in materials and workmanship, provided the speaker was purchased from a Sonance Authorized Dealer.

Defective products must be shipped, together with proof of purchase, prepaid insured to the Authorized Sonance Dealer from whom they were purchased, or to the Sonance factor at the address listed on this instruction manual. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk or loss or damage in transit is to be borne by the purchaser. If, upon examination at the Factor or Authorized Sonance Dealer, it is determined that the unit was defective in materials or workmanship at any time during this warranty period, sonance or the Authorized Sonance Dealer will, at its option, repair or replace this product at no additional charge, except as set forth below. It this model is no longer available and can not be repaired effectively, Sonance, at is sole option, may replace the unit with a current model of equal or grater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, Sonance assumes no responsibility or liability for such modification. All replaced parts and product become the property of Sonance. Products replaced or repaired under this warranty will be returned to the original retail purchaser, within a reasonable time, freight prepaid.

This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product which has not been authorized or approved by Sonance. This Warranty also excludes normal cosmetic deterioration caused by environmental conditions. This Warranty will be void if the Serial Number on the product has been removed, tampered-with or defaced. This Warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will Sonance be liable for any incidental or consequential damages arising out of the use or inability to use the product, even if Sonance or a Authorized Sonance Dealer has been advised of the possibility of such damages, or for any claim by any other party.

Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply. All implied warranties on the product are limited to the duration of this expressed Warranty. Some states do not allow limitation on the length of an implied warranty. If the original retail purchaser resides in such a state, this limitation does not apply.

EXCLUSIONS AND LIMITATIONS

The warranty set forth above is in lieu of all other warranties, express or implied, of merchantability, fitness for a particular purpose, or otherwise. The warranty is limited to Sonance products registered herein and specifically excludes any damage to loudspeakers and other allied or associated equipment which may result for any reason from use with this product. Sonance shall, in no event, be liable for incidental or consequential damages arising from any breach of this warranty or otherwise. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

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